OIPE JAN 05 1998 PATENT & TRADEMARK OFFICE TC 1400

X099

# Ligate & Electroporate 2-4Kb + >4Kb cDNA

Purpose: Make sure the larger sized fractions are okay & determine their sizes.

## Ligation

| tube | vector | insert | $H_2O$ | 45°C 5' | 1µl 10X lig buffer + 1µl T4 DNA ligase |
|---|---|---|---|---|---|
| 1 | pcDNA1 NotI/BstXI gel purified X070 1µl = 24ng | — | 8µl | ✓ | 1µl |
| 2 | " | cDNA 2-4Kb X095 1.5µl = 6ng | 6.5µl | ✓ | 1µl |
| 3 | " | cDNA >4Kb X095 6µl = 6ng | 2µl | ✓ | 1µl |

15°C overnight

Attachment A

X099 cont'd

## CREATION OF EXPRESSION LIBRARY POOLS

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~~DAY 1~~:

**Prepare bacteria**

1) ~~Streak out MC1061/P3 onto LB/Kanamycin (15 µg/ml) plate~~

**Prepare reagents and everything else**

2) Make LB/Amp (15 µg/ml)/Tet (8 µg/ml) plates (15 cm). Make 1 liter total.
3) Sterilize:
   eppendorfs (1/electroporation)
   ddH20 (500 ml)
   10% glycerol (500 ml)
   pasteur pipets (long ones)
   1 M MgCl2
   1 M MgSO4
   1 M glucose
4) Put in cold room:
   all the above sterilized stuff except medium stuff
   electroporation cuvettes (0.2 cm gap)
   pipet tips (yellows/blues?)
   also sign up centrifuges

~~DAY 2~~:

**Bacteria**

8) Start overnight cultures of MC1061/P3 from A. Pearsons plate of MC1061/P3 from Lodish lab
   Pick ~~at least 2 colonies~~ into 3 mls each of LB+Kanamycin (15µg/ml)
   ~~Also streak each onto half a plate of LB/Amp/Tet (only undesirable revertents should grow)~~

~~DAY 3~~:

**Get bacteria ready for electroporation**

9) Put 3 ml of starter culture into 250 ml LB + Kanamycin (15µg/ml)
   Grow until 0.5 - 0.7 O.D.

| time | O.D.600 |
|---|---|
| 7:25 | - |
| 10:00 | 0.320 |
| 10:20 | 0.497 |
| 10:35 | 0.600 ⇒ on ice |

**Clean up ligation**

10) Add TE pH 8.0 to 50 µl
11) Add 50 µl Phenol/Chloroform/Isoamly alcohol
    Vortex, Spin and recover top aqueous layer
12) Add 50 µl TE pH 8.0 to organic layer to backextract
    Vortex, Spin and recover top aqueous layer and add to previous aq. layer (total = 100µl)
13) Add
    5 ~~10~~ µl 1X LPA ✓
    10 µl 3M NaOAc ✓
    250 ~~250~~ µl 100% ethanol
14) Put at ~~-80~~°C 30 min 8:30 ✓ rinse w/ 70% EtOH
15) Spin down at 4°C, remove supe and ~~air dry~~ speed-vac (don't dry completely) — tube 1 dried completely
16) ~~Just before ready to use,~~ resuspend in 8 µl TE (sterile) keep on ice.

Use 2µl/electroporation
Freeze rest in cDNA box -20°C.

**Get bacteria ready for electroporation (everything on ice!)**

17) Put culture into ice water to chill 15 min (swirl occasionally) 10:35 - 10:50
18) Spin down in 1 disposable conical tube, 4°C, 15 min, 4000 rpm (2600 xg), 10:55 - 11:10
19) Decant most but not all liquid (leave equal volume liquid as in pellet). Add 5 ml sterile water and resuspend gently with pipet.
20) Add 250 ml ice-cold ddH20 (sterile), spin 15 min, 4°C, 4000 rpm
21) Repeat steps 19-20 but spin 20 min.
22) Pour off as much supe as possible (you'll lose some bugs), add 10% glycerol to 12 mls, gently resuspend cells and spin 8,000 rpm 30 min 4°C in SS-34 (in Falcon 2059 tube)
23) Pour off supe getting rid of almost all liquid (you'll lose some cells). You want it thick. Resuspend in 100 µl 10% glycerol (you want it thick) Used 200µl, had 100µl left over. Next time resuspend in 50µl? or don't add any liquid at all? yes should get only 3 electro/250 mls

**During spin periods set up for electroporation**

24) Make SOC from SOB
25) Put electroporator chamber on ice
26) Connect pulse controller to gene pulser (connect in front the red to red and black to black). The cuvette holder should then be connected to the pulse controller.
27) Set to:
    200 ohms
    25 µF
    2.5 kV
28) Get everything else ready (Falcon 2059 with 1 ml SOC each, pasteurs, tips, etc)

**Electroporation**

Always do controls: water only (neg. control) and uncut vector (positive control)

30) Swirl bacteria with sterile yellow tip. Pipet up 40 µl bacteria to tube #1 on ice. Pipet up and down avoiding generation of bubbles. Let sit 30 sec on ice.
31) With fresh tip take up bacteria and put into cuvette as close to bottom as possible without creating bubbles. Quickly shake hard down to bottom (v. important).
32) Take off cap, put in electroporator chamber, pulse
33) Quickly remove cuvette and add 1 ml SOC. Resuspend with pasteur pipet and transfer to 15 ml round bottom and incubate shaking at 37°C, 60 min. 1pm - 2pm
34) Repeat steps - for each electroporation.
35) Put LB/Amp/Tet plates into hood to dry.
36) Plate out 50 - 100 µl/plate to test for electroporation efficiency.
    Use 1:100 of positive control
    ~~1:5 of ligation mix~~
    undiluted neg. control
    Grow overnight 37°C. Store electroporated bacterial cultures at 4°C up to one week.
37) Count colonies.

| electro # | DNA | tau | amt plated | colonies | effic. (col/ug) | for 5000 col per plate vol of undi |
|---|---|---|---|---|---|---|
| 1 | Lig #1 - 2µl of 8µl | 4.5 | 10µl + 90µl LB | 70 | $1.2 \times 10^6$ | — |
| 2 | 0 #2 " | 4.5 | ↓ | 2072 | $3.5 \times 10^7$ | 24µl |
| 3 | " #3 " | 4.5 | ↓ | 1300 | $2.2 \times 10^7$ | 38µl |
| 4 | - (2µl TE) | 4.5 | 100µl | 13 | — | — |
| 5 | pcDNA1 insert (2.5 Kb insert) (1µl = 0.5ng) 2µl | 4.5 | 1µl + 99µl LB | 553 | $5.6 \times 10^8$ | — |

electro

#2 pcDNA1 + 2-4Kb 24µl/plate ⇒ 42 plates = 210,000 clones assume 75% loss 48 ng/plate ~32 plat

#3 pcDNA1 + >4Kb 38µl/plate ⇒ 26 plates = 130,000 clones 30ng/plate 48µl/plate ~20 pla

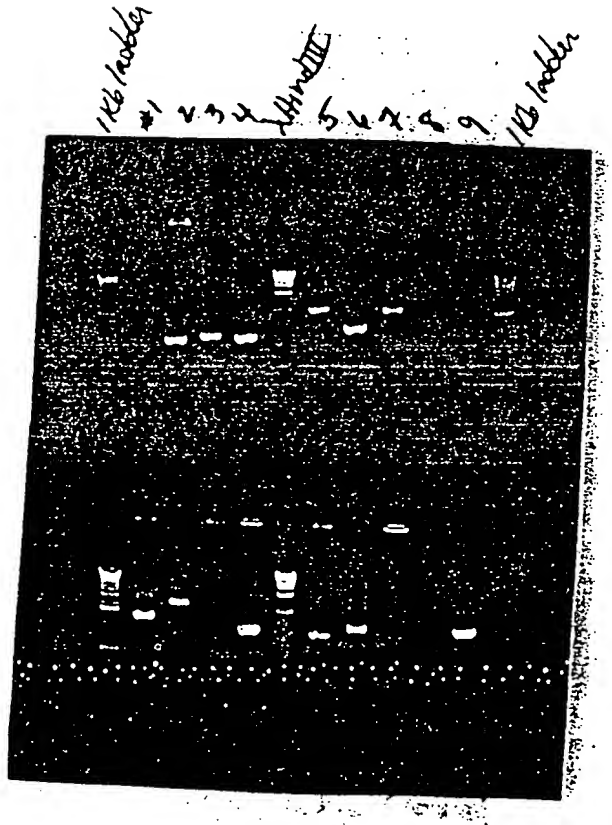
X099 cont'd

# PCR of colonies to check cDNA sizes

19μl 10X PCR buffer
47.5μl T7 primer
47.5μl SP6 primer
0.95μl Taq polymerase
1.52 mix of dNTPs (each 25mM) → 3μl dATP, 3μl dCTP, 3μl dTTP, 3μl dGTP
73.5μl $H_2O$
190μl total

12μl dNTPs (freeze in PCR box -20°C)

Aliquot 15μl PCR oil/tube
Aliquot 10μl above stock soln/tube
Flame straight needle, poke colony, then into PCR tube
PCR 94°C 30 sec → 50°C 30 sec → 72°C 2 min ×35 cycle
Add 1μl 10X blue juice
Load 6μl/lane onto 0.9% Seakem GTG agarose minigel




| colony | cDNA size | miniprep |
|---|---|---|
| 1 | – | 2.5 |
| 2 | 0.7 | |
| 3 | 0.8 | |
| 4 | 0.7 | |
| 5 | 2.0 | |
| 6 | 1.0 | |
| 7 | 1.9 | |
| 8 | – | 2.1 |
| 9 | – | 2.8 |
| 10 | 1.2 | |
| 11 | 2.4 | |
| 12 | – | 0.8 |
| 13 | 0.9 | |
| 14 | 0.8 | |
| 15 | 1.0 | |
| 16 | – | 3.0 |
| 17 | – | – |
| 18 | 0.9 | |

avg size = 1.6
medsize = 1.9

avg. size = 1.4
medsize = 0.95

X099 cont'd

# Mini-preps of clones that did not PCR

Method: Maniatis

Changes: ① Spun twice to get rid of white particulate matter after adding sol'n III
② Phenol/Sevag extracted
③ Resuspended in 25µl TE pH 8

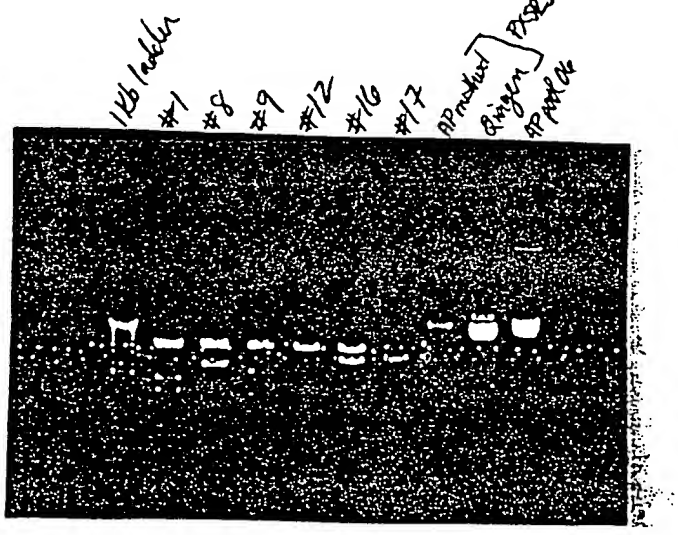
| original cDNA fraction | Colonies |
|---|---|
| 2-4Kb | 1, 8, 9 |
| >4Kb | 12, 16, 17 |

Digest

| plasmid | NEB2 10X buffer | 10X AcBSA | 10 mg/ml ~~200 µg/µl~~ RNAse | $H_2O$ | Not I + Hind III 50:50 mix |
|---|---|---|---|---|---|
| ~~2µl~~ | 7µl + | 7µl + | 0.1µl + | 25µl + | 7µl |

2µl each + 8µl above rxn mix

37°C 2hrs (3:45-5:45)




| colony | size |
|---|---|
| #1 | 1.1 + 1.4 = 2.5 |
| 8 | 2.1 |
| 9 | 1.0 + 1.8 = 2.8 |
| 12 | 0.8 |
| 16 | 3.0 |
| 17 | – |

PX5R3 (1µl each) - Not sure if state of DNA is very different or loading made a difference in the way it ran

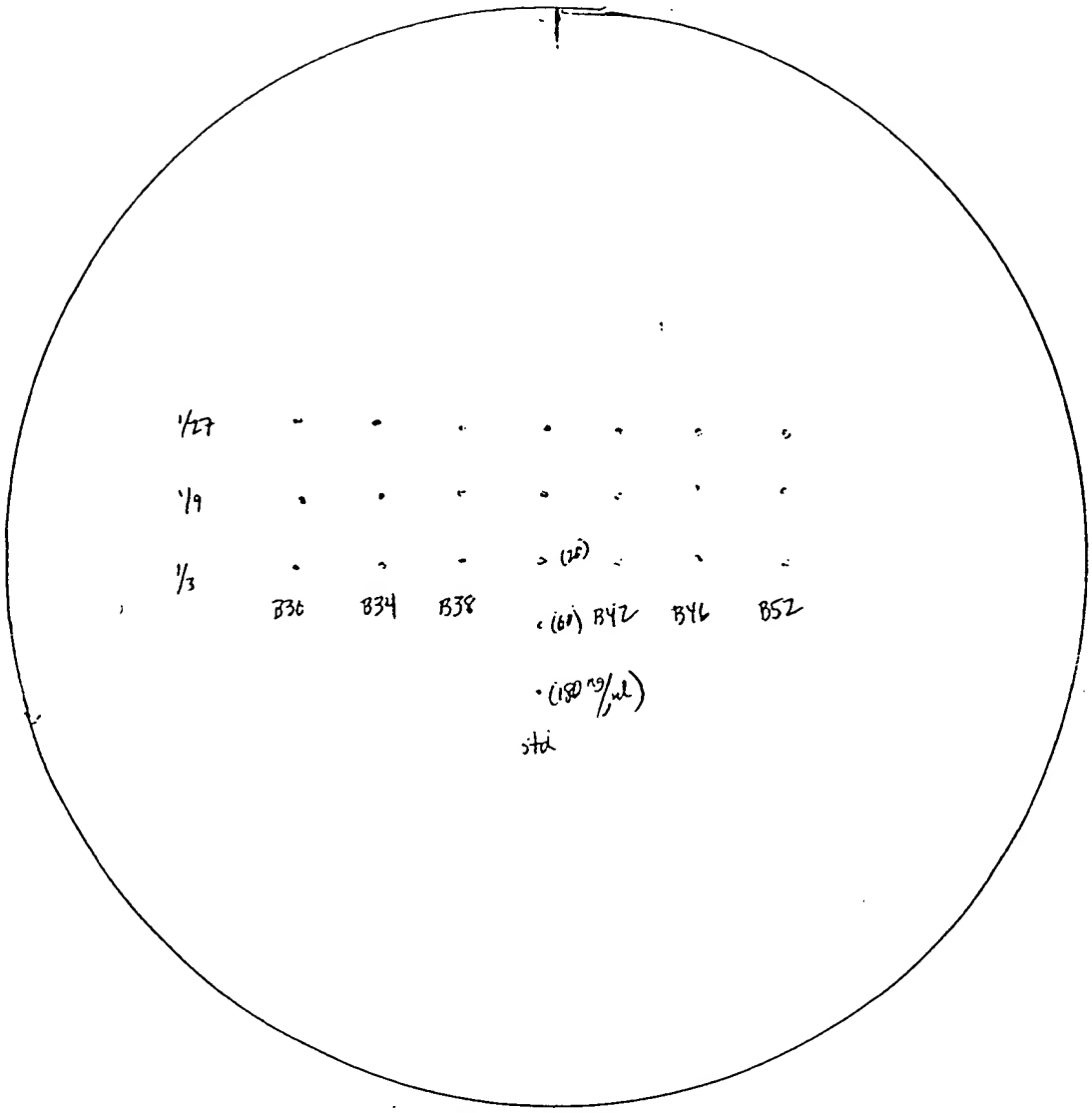
Plasmid midiprep for cDNA library

preps: B46 - B53

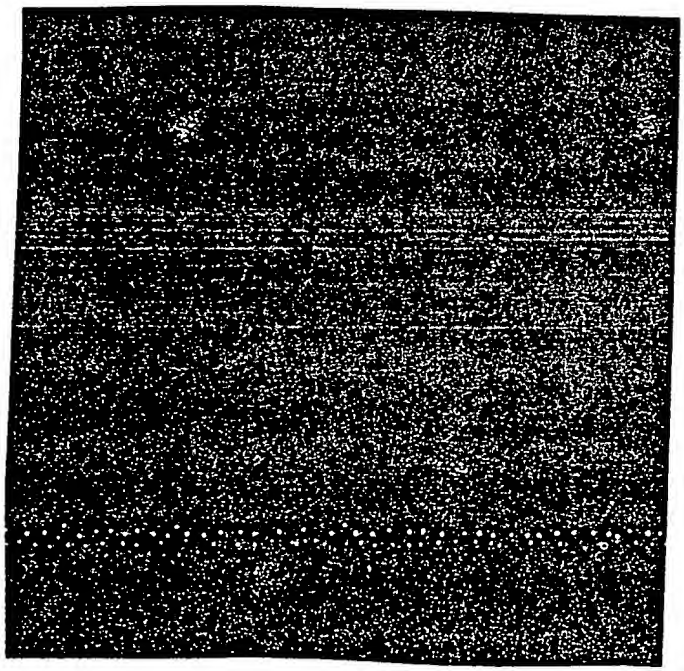
Day 1

1. Scrape 150 mm plate with 5 mls LB. Transfer to Falcon 2059 15 ml tube on ice.
2. Add another 3 mls LB to plate and scrape again.
3. Take 400 µl, put into freezer vial, add 100 µl glycerol and freeze at -150C.
4. Spin rest in SS-34, 9000 rpm, 2 min 4C.
5. Dry pellet as much as possible.
6. Resuspend pellet in 500 µl ice cold solution I by vigorous vortexing.
7. Add 1 ml fresh solution II (0.2 N NaOH, 1% SDS)
   for 100 ml: 1 ml 2 N NaOH
   0.5 ml 20% SDS
   8.5 mls ddH20
   Swirl gently until clear. Do not vortex. Leave on ice 10 min.
8. Add750 µl solution III (ice-cold). Close tubeand mix contents by shaking vigorously several times. Store on ice 5'. A flocculent white precipitate should form.
9. Centrifuge 15', 4°C, 9000 rpm.
10. Recover supe and add equal volume of phenol:chloroform. Mix by vortexing.
11. Spin 9000 rpm, 5'.
12. Add 2 volumes, ethanol r.t., vortex, let stand 5'.
    Spin in SS-34 rotor for 15' 9,000 rpm.
13. Carefully aspirate off all liquid (want it dry) and rinse once in cold 70% EtOH. Aspirate again getting any extraneous drops. Airdry 10' minutes.
14. Redissolve in 100 µl TE plus DNAse-free RNAse (20 µg/ml). Vortex briefly. ~~Incubate 37C, 30'~~.
    Transfer to sterile eppendorf.
15. Quantitate by dilutions onto EtBr plate.

Store at 4°C O.N.
Incubate 37°C 2½ hrs
Freeze




Note:
Photograph is mirror image of schematic above



Slight variation in preps. I think 5 ul/transfection will be good for all.

X112 Screen cDNA pools B63-B76, redo B47

**DEAE dextran transfections of COS M6 cells**

**materials:**

1. 35 mm dishes
2. DMEM with 10% FBS
3. Chloroquine (40 mM in CMF PBS, sterile filtered)
4. DNA
5. CMF PBS
6. DEAE-dextran (10 mg/ml in CMF PBS (autoclaved))
7. DMSO
8. cPBS
9. sterile tips

**method:**

day 0 (set up cells)

Set COS M6 cells in 35 mm dishes at 300,000 cells/dish in 2 ml DMEM with 10% FBS

day 1 (transfect)

1. In sterile eppendorfs prepare for each dish add (in order):
   a) DNA - 500 ng/dish
   b) add CMF PBS to 190 µl, vortex
   c) 10 µl of 10 mg/ml DEAE-dextran, vortex well (7 seconds)

| tube # | plates | DNA | | CMF PBS | 10 mg/ml DEAE-dextran | positives | mayb |
|---|---|---|---|---|---|---|---|
| 1 | | cDNA pool | B63 | 180µl | 10µl | 1 | 2 |
| 2 | | | B64 | | | 4 | 7 |
| 3 | | | B65 | | | 1 | 6 |
| 4 | | | B66 | | | 1 | 0 |
| 5 | | | B67 | | | 2 | 0 |
| 6 | | | B68 | | | 0 | 1 |
| 7 | | | B69 | | | 0 | 4 |
| 8 | | | B70 | | | 2 | 3 |
| 9 | | | B71 | | | 2 | 4 |
| 10 | | | B72 | | | 0 | 1 |
| 11 | | | B73 | | | 4 | 0 |
| (12) | | | B74 | | | 12 | 4 |
| 13 | | | B75 | | | 2 | 2 |
| 14 | | | B76 | | | 2 | 5 |
| (15) | | | B47 - redo from X111 | | | 9 | 4 |
| (16) | | | B47 - redo from X111 | | | 12 | 2 |
| 17 | | pcDNA1 | 0.39 | | | 0 | 2 |
| 18 | | 1:5000 | 9.2µl | | | 396 | 8 |

2. Rinse cells with 2 mls CMF PBS (37C). Aspirate PBS.
3. Add transfection cocktail from step 1 and distribute evenly. Incubate 30 minutes, distributing liquid every 10 min. 9:50 - 10:20
4. Add 2 ml DMEM 10% FBS + 80 µM chloroquine and incubate 37C 2.5 hrs. 10:20 - 12:50
5. Aspirate off medium and replace with 1 ml 10% DMSO in DMEM 10% FBS for 2.5 min.
6. Aspirate off and wash once with 2 mls cPBS.
7. Refeed with 2 ml warm DMEM 10% FBS/dish. Incubate overnight.

Day 2

Refeed cells with 2 ml DMEM 10% FBS + 1 mM Nabutyrate pH 7.3.

Day 3

Refeed cells with 0.75 ml DMEM 10% FBS + 1 mM Nabutyrate pH 7.3 + 3 µg/ml DiI-AcLDL for 5 hrs.

14.25 ml DMEM 10% + 14.25µl 1M Nabut + 158µl DiI-AcLDL prep #48 (0.27 mg/ml)

| plate | DNA | positives | maybes |
|---|---|---|---|
| (1) | B47 pool | 7 (10) | 5 (6) |
| 2 | B48 | 3 | 4 |
| 3 | B49 | 1 | 0 |
| 4 | B50 | 2 | 6 |
| 5 | B51 | 0 | 1 |
| 6 | B52 | 0 | 0 |
| 7 | B53 | 2 | 2 |
| 8 | B54 | 2 | 5 |
| 9 | B55 | 0 | 0 |
| 10 | B56 | 2 | 4 |
| 11 | B57 | 2 | 5 |
| 12 | B58 | 3 | 8 |
| 13 | B59 | 1 | 4 |
| 14 | B60 | 3 | 2 |
| (15) | B61 | 6 (4) | 2 (3) |
| 16 | B62 | 1 | 2 |
| 17 | pcDNA1 | 1 | 2 |
| 18 | 1:5000 | 430 | - |

Positives are scored if cells are punctate

parentheses are recounts

X120 Create subpools of 15 colonies of B47.1.8

Purpose: Reduce pool size to approx 15 colonies to narrow the search for the MAC26-1 receptor.

Transform competent MC1061/P3 (Q.G. purple dot) usual procedure but didn't incubate on ice 30'; just heat-shocked 37° 5' right away. Still worked

Plated 5µl - count 930 (B47.1.8)
4 (no DNA)

Took 3.2µl transformed bugs + 1.9 mls LB
plated 50µl/plate

Counted plates

| | colonies |
|---|---|
| B47.1.8.1 - | 19 |
| .2 - | 15 |
| .3 - | 19 |
| .4 - | 23 |
| .5 - | 15 |
| .6 - | 13 |
| .7 - | 17 |
| .8 - | 21 |
| .9 - | 15 |
| .10 - | 33 |
| .11 - | 18 |
| .12 - | 17 |
| .13 - | 22 |
| .14 - | 26 |
| .15 - | 11 |
| .16 - | 16 |
| .17 | 17 |
| .18 | 15 |
| .19 - | 25 |
| .20 - | 14 |
| .21 - | 19 |
| .22 - | 16 |
| .23 - | 23 |
| .24 - | 23 |
| .25 - | 25 |
| .26 - | 16 |
| .27 - | 19 |
| .28 - | 23 |
| .29 - | 26 |
| .30 - | 22 |
| .31 - | 19 |
| .32 - | 18 |
| .33 - | 17 |
| .34 - | 20 |
| 35 - | 19 |
| 36 - | 31 |

| 1st 24 pools | all 36 pools |
|---|---|
| 452 | 717 |
| plate 18.8 | 19.9 |

IX120 cont'd

Plasmid midiprep for cDNA library

preps: B47.1.8.1 - B47.1.8.24

Day 1

1. Scrape 100 mm plate with 2 mls LB. Transfer to Falcon 2059 15 ml tube on ice.
2. Add another 2 mls LB to plate and scrape again.
3. Spin in SS-34, 9000 rpm, 2 min 4C.
5. Dry pellet as much as possible.
6. Resuspend pellet in 300 µl ice cold solution I by vigorous vortexing.
7. Add 0.6 ml fresh solution II (0.2 N NaOH, 1% SDS)
   for 100 ml: 1 ml 2 N NaOH
   0.5 ml 20% SDS
   8.5 mls ddH20
   Swirl gently until clear. Do not vortex. Leave on ice 10 min.
8. Add 450 µl solution III (ice-cold). Close tubeand mix contents by shaking vigorously several times. Store on ice 5'. A flocculent white precipitate should form.
9. Centrifuge 15', 4°C, 9000 rpm.
10. Recover supe and add equal volume (1.2 ml) of phenol:chloroform. Mix by vortexing.
11. Spin 9000 rpm, 5'.
12. Add 2 volumes (2.5) ethanol r.t., vortex, let stand 5'. overnight (1-16) or 6hrs (17-24) Spin in SS-34 rotor for 15' 9,000 rpm.
13. Carefully aspirate off all liquid (want it dry) and rinse once in cold 70% EtOH. Aspirate again getting any extraneous drops. Airdry 10' minutes.
14. Redissolve in 50 µl TE plus DNAse-free RNAse (20 µg/ml). Vortex briefly. Incubate 37C, 2 hr. Transfer to sterile eppendorf.
15. ~~Quantitate by dilutions onto EtBr plate~~.

X121 Screen subpools B47.1.8.1 - B47.1.8.24; compare CD36 with B47.1.8

**DEAE dextran transfections of COS M6 cells**

**method:**

day 0 (set up cells)

Set COS M6 cells in 35 mm dishes at 300,000 cells/dish in 2 ml DMEM with 10% FBS

day 1 (transfect)

1. In sterile eppendorfs prepare for each dish add (in order):
   a) DNA - 500 ng/dish
   b) add CMF PBS to 190 µl, vortex
   c) 10 µl of 10 mg/ml DEAE-dextran, vortex well (7 seconds)

| tube | # plates | | CMF PBS | 10 mg/ml DEAE-dextran | Results |
|---|---|---|---|---|---|
| 1 | B47.1.8.1 | 10µl | 180µl | 10µl | − |
| 2 | 2 | | | | − |
| 3 | 3 | | | | − |
| (4) | 4 | | | | + |
| 5 | 5 | | | | ? |
| 6 | 6 | | | | − |
| 7 | 7 | | | | − |
| 8 | 8 | | | | − |
| 9 | 9 | | | | − |
| 10 | 10 | | | | − |
| 11 | 11 | | | | − |
| 12 | 12 | | | | − |
| 13 | 13 | | | | − |
| 14 | 14 | | | | − |
| 15 | 15 | | | | − |
| 16 | 16 | | | | − |
| 17 | 17 | | | | − |
| 18 | 18 | | | | − |
| (19) | 19 | | | | + |
| 20 | 20 | | | | − |
| 21 | 21 | | | | − |
| 22 | 22 | | | | − |
| 23 | 23 | | | | − |
| (24) | 24 | | | | + |
| 25 | bSRII (PXSR3) | - | 1.5µl | 30µl | v. bright |
| 26 | ↓ | poly I | X | X | nothing |
| 27 | ↓ | m BSA | X | X | v. bright |
| 28 | CD36 | - | 15µl | 30µl | v. bright |
| 29 | ↓ | poly I | X | X | v. bright |
| 30 | ↓ | m BSA | X | X | nothing |
| 31 | B47.1.8 | - | 30µl | 30µl | pos. cells |
| 32 | ↓ | poly I | X | X | pos. cells |
| 33 | ↓ | m BSA | X | X | nothing? |
| 34 | pcDNA1 | | 0.3µl | 10µl | |
| 35 | | | | | |

Pool #4 was brightest & w/more positive cells.

CD36 binds acetylated LDL & is not inhibited by poly I but is inhibited by small amounts of m-BSA

∴ CD36 has same properties as MAC 26-1 receptor!

X12-1 cont'd

2. Rinse cells with 2 mls CMF PBS (37C). Aspirate PBS.
3. Add transfection cocktail from step 1 and distribute evenly. Incubate 30 minutes, distributing liquid every 10 min.
4. Add 2 ml DMEM 10% FBS + 80 µM chloroquine and incubate 37C 2.5 hrs. 11:50 - 1:20 pm
5. Aspirate off medium and replace with 1 ml 10% DMSO in DMEM 10% FBS for 2.5 min.
6. Aspirate off and wash once with 2 mls cPBS.
7. Refeed with 2 ml warm DMEM 10% FBS/dish. Incubate overnight.

Day 2

Refeed cells with 2 ml DMEM 10% FBS + 1 mM Nabutyrate pH 7.3.

Day 3

Refeed cells with 0.75 ml DMEM 10% FBS + 1 mM Nabutyrate pH 7.3 + 3 µg/ml DiI-AcLDL for 5 hrs.

1.27 mls med + 27µl 1M Nabut + 300µl DiIAcLDL (#48 0.27 mg/ml)

2.25 mls + 225µl polyI (4 mg/ml) = 400µg/ml

2.25 mls + 1.35 m-BSA (3.34 mg/ml) = 2µg/ml

9:20 - 2:20 pm

| # pos cells | brightn |
|---|---|
| 4 > 24 > 19 | 4 > 24 > 19 |

XIZZ Create subpools of 1 colony of B47.1.8 and Screen

Purpose:

Transform competent ($CaCl_2$) MC1061/P3 (Q.Quo purple)

1. Thaw aliquots (2) of bugs on ice
2. Add 2µl of DNA (or TE) to aliquot
   DNA = pool B47.1.8.4
   TE = neg. control
3. Carefully pipet up & down twice to mix
4. Heat shock 37°C 5 min.
5. Add 200µl LB medium Shake 1 hr 37°C
6. Plate 5µl on 150 mm LB Amp/tet plate

Results: Transformation worked well. Circled 49 apparently single colonies to be picked. Picked each (done by me ~~Ana Maria Vrinceanu~~) into 3 mls LB A/T. Grew overnight.

Also had Ana Maria Vrinceanu repick off same plate & streak onto new plates. (4 indiv/150mm plate)

X122 cont'd

Plasmid miniprep for cDNA library

preps: Matrix. 7×7 rows A-F, columns 1-7

14 mini-preps

Day 1

1. Take 200 µl culture from each tube in a row or column of 7 and put into eppendorf. Store remainder at 4°C.
2. Spin at 12,000 x g for 30 sec in microfuge.
3. Remove medium by aspiration, leaving bacterial pellet as dry as possible.
4. Resuspend pellet in 100 µl ice-cold solution I by vigorous vortexing.
5. Add 200 µl fresh solution II (0.2 N NaOH, 1% SDS)
   for 2 ml: 0.2 ml 2 N NaOH
   0.1 ml 20% SDS
   1.7 mls ddH20
   Swirl gently until clear. Do not vortex. Leave on ice 10 min.
6. Add 150 µl solution III (ice-cold). Close tube and vortex gently inverted for 5 sec. Store on ice 5'. A flocculent white precipitate should form.
7. Centrifuge 5', 4°C, max speed in microfuge:
8. Recover supe and add equal volume of phenol:chloroform. 400µl Mix by vortexing.
9. Spin 2' in microfuge.
10. Add 2 volumes, ethanol 800µl r.t., vortex, let stand 2' at r.t..
    Spin 5', 4°C max speed in microfuge.
11. Carefully aspirate off all liquid (want it dry) and rinse once in cold 70% EtOH. Aspirate again getting any extraneous drops. Airdry 10' minutes.
12. Redissolve in 10 µl TE plus DNAse-free RNAse (20 µg/ml). Vortex briefly. Incubate 37C, 0.5 hr. ~~Transfer to sterile eppendorf.~~

X122 cont'd Screen matrix

**DEAE dextran transfections of COS M6 cells**

**materials:**

1. 35 mm dishes
2. DMEM with 10% FBS
3. Chloroquine (40 mM in CMF PBS, sterile filtered)
4. DNA
5. CMF PBS
6. DEAE-dextran (10 mg/ml in CMF PBS (autoclaved))
7. DMSO
8. cPBS
9. sterile tips

**method:**

day 0 (set up cells)

Set COS M6 cells in ~~35~~ 6-well mm dishes at 300,000 cells/~~dish~~ well in 2 ml DMEM with 10% FBS

day 1 (transfect)

1. In sterile eppendorfs prepare for each dish add (~~in order~~):
   a) DNA - 500 ng/dish
   b) add CMF PBS to 190 µl, vortex
   c) 10 µl of 10 mg/ml DEAE-dextran, vortex well (7 seconds)

| tube # | plates | DNA | CMF PBS | 10 mg/ml DEAE-dextran | Results |
|---|---|---|---|---|---|
| 1 | row A | plasmid prep from matrix | 5µl | 185µl | 10µl + 3rd brightest |
| 2 | B | | | | − |
| 3 | C | | | | − |
| 4 | D | | | | + v. faint few |
| 5 | E | | | | − |
| 6 | F | | | | + 2nd brightest |
| 7 | G | | | | + brightest row |
| 8 | column 1 | | | | + |
| 9 | 2 | | | | − |
| 10 | 3 | | | | + |
| 11 | 4 | | | | + weak |
| 12 | 5 | | | | − |
| 13 | 6 | | | | + prob. |
| 14 | 7 | | | | + prob. brightest |
| 15 | pcDNA1 | | | | − |
| 16 | 1:5000 (bsrGI) | 0.9 | 190µl | | |
| 17 | | 9.3µl | 180µl | | |
| 18 | | | | | |

2. Rinse cells with 2 mls CMF PBS (37C). Aspirate PBS.
3. Add transfection cocktail from step 1 and distribute evenly. Incubate 30 minutes, distributing liquid every 10 min.
4. Add 2 ml DMEM 10% FBS + 80 µM chloroquine and incubate 37C 2.5 hrs.
5. Aspirate off medium and replace with 1 ml 10% DMSO in DMEM 10% FBS for 2.5 min.
6. Aspirate off and wash once with 2 mls cPBS.
7. Refeed with 2 ml warm DMEM 10% FBS/dish. Incubate overnight.

Day 2

Refeed cells with 2 ml DMEM 10% FBS + 1 mM Nabutyrate pH 7.3.

Day 3

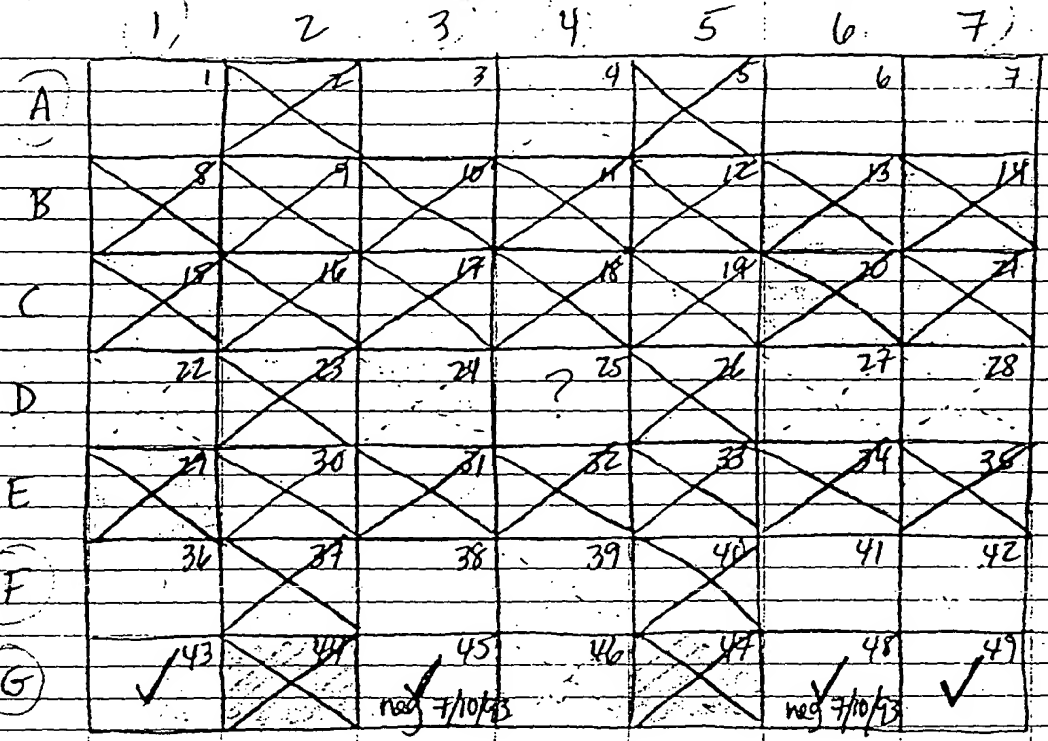
Refeed cells with 0.75 ml DMEM 10% FBS + 1 mM Nabutyrate pH 7.3 + 3 µg/ml DiI-AcLDL for 5 hrs.

13.5 ml " + 13.5 µl 1M Nabut + 150 µl DiIAcLDL #48 (0.27 mg/ml)

9:20 - 2:20

Results: Lots! of positives. Row 6 seemed brightest so

X122 (cont'd) Matrix




As stated before,
Plated all 49 out on LB Amp/Tet plates
(before results of this exp't were known)

Picked a single colony (hopefully) from the plates of #7, 28, 42/43, 45, 46, 48/49

#42 did not grow, but rest did

Decided to keep things simple so mini-preped only #43, 45, 48, 49 (see X124)

X124 cont'd

**DEAE dextran transfections of COS M6 cells**

**materials:**

1. 35 mm dishes
2. EDMEM with 10% FBS
3. Chloroquine (40 mM in CMF PBS, sterile filtered)
4. DNA
5. CMF PBS
6. DEAE-dextran (10 mg/ml in CMF PBS (autoclaved))
7. DMSO
8. cPBS
9. sterile tips

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**Method:**

day 0 (set up cells) 6-well well
Set COS M6 cells in ~~35~~ mm dishes at 300,000 cells/~~dish~~ in 2 ml DMEM with 10% FBS

day 1 (transfect) - Note: cells were way too heavy (used Coulter counter) Its better to use 1 confluent T75 for 18 wells than use the counter which isn't working.

1. In sterile eppendorfs prepare for each dish add (in order):
   a) DNA - 500 ng/dish
   b) add CMF PBS to 190 µl, vortex
   c) 10 µl of 10 mg/ml DEAE-dextran, vortex well (7 seconds)

| tube | # plates | | CMF PBS | 10 mg/ml DEAE-dextran | results |
|---|---|---|---|---|---|
| 1 | 847.1.8.4.43 | - 5µl | 185µl | 10µl | + |
| 2 | .45 | ↓ | ↓ | ↓ | − |
| 3 | .48 | ↓ | ↓ | ↓ | − |
| 4 | (.49) | ↓ | ↓ | ↓ | + brightest |
| 5 | pcDNA1 | - 0.5µl | 190 | ↓ | − |
| 6 | PXSR3 | - 0.5µl | ↓ | ↓ | + |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |

2. Rinse cells with 2 mls CMF PBS (37C). Aspirate PBS.
3. Add transfection cocktail from step 1 and distribute evenly. Incubate 30 minutes, distributing liquid every 10 min.
4. Add 2 ml DMEM 10% FBS + 80 µM chloroquine and incubate 37C 2.5 hrs.
5. Aspirate off medium and replace with 1 ml 10% DMSO in DMEM 10% FBS for 2.5 min.
6. Aspirate off and wash once with 2 mls cPBS.
7. Refeed with 2 ml warm DMEM 10% FBS/dish. Incubate overnight.

Day 2
Refeed cells with 2 ml DMEM 10% FBS + 1 mM Nabutyrate pH 7.3.

Day 3
Refeed cells with 0.75 ml DMEM 10% FBS + 1 mM Nabutyrate pH 7.3 + 3 µg/ml DiI-AcLDL for 5 hrs.

6 wells
6.5 mls

1M 0.27 mg/ml

4.85 ml DMEM 1M
X 1mM (stock)

0.15 ml

B47.1.8.4.49 was chosen as cloned MAC26-1 receptor & was renamed phaSR III (Note: Ana Maria Vrinceanu did several exp'ts to show that the plasmid was a single one & repeatedly gave the expected activity)